Please delete the paragraph on page 32, lines 5-9, and replace it with the following paragraph:

FIG. 7 shows the results of an ELISA demonstrating the specificity of antibodies generated following inoculation of mice with purified Tr-env protein. Ova, ovalbumin; Ova-random, ovalbumin-conjugated random-288-301 peptide (SEQ ID NO: ~~5~~14); Ova-281, ovalbumin-conjugated WNE-288-301 peptide (SEQ ID NO: 4~~1~~3). 100, 1000, and 6000 represent serum dilutions of 1:100, 1:1000 and 1:6000.

Please delete the paragraph on page 94, lines 4-10, and replace it with the following paragraph:

PCR primers, WN-233F (5'-GACTGAAGAGGGCAATGTTGAGC-3'; SEQ ID: ~~1~~16) and WN-1189R (5'-GCAATAACTGCGGACYTCTGC-3'; SEQ ID: ~~2~~17) were designed to specifically amplify envelope glycoprotein sequences from WNV based on an alignment of six flavivirus isolates listed in GenBank□ (accession numbers: M16614 (St. Louis encephalitis virus); M73710 (Japanese encephalitis virus); D00246 (Kunjin virus); M12294 (West Nile virus); AF130362 (West Nile virus strain RO97-50); AF130363 (West Nile virus strain 96-1030)).

Please delete the paragraph on page 96, lines 15-23, and replace it with the following paragraph:

As an alternative method to express and purify the WNV envelope glycoprotein, a PCR product encoding the WNV E glycoprotein was engineered as a fusion protein with maltose binding protein (MBP). Nucleotides 1-1218 of the WNV E glycoprotein were amplified by PCR using the following primers which contain *Eco*RI and *Pst*I restriction sites to facilitate subcloning: 5'GAATTCTTCAACTGCCTTG GAATGAGC-3' (SEQ ID NO: ~~6~~18) and 5'CTGCAGTTATTTGCCAATGCTGCTT CC-3' (SEQ ID NO: ~~7~~19). The resulting PCR product was digested with *Eco*RI and *Pst*I and the resulting fragment was cloned into the

pMAL□-c2X vector (New England Biolabs, Beverly, MA), creating a recombination fusion to the *E. coli malE* gene which encodes the maltose-binding protein (MBP).

Please delete the paragraph on page 106, lines 16-27, and replace it with the following paragraph:

The NTPase/helicase domain (amino acids 182 to 619) of NS3 (see Fig. 23B) and full-length NS5 (see Fig. 23C) of WNV were expressed and purified using an *E. coli* expression system as follows. The NTPase/helicase domain of NS3 (amino acids 182 to 619) and full-length NS5 were cloned into the pET-21a and pET-28a vectors, respectively, and expressed in *E. coli* BL21 cells upon induction with isopropyl-β-D-thiogalactopyranoside (IPTG) at 30°C for 3 to 4 h. The recombinant NS5 and NS3 NTPase/helicase domain contained a His_6 tag **(SEQ ID NO: 20)** at the N-terminus and C-terminus, respectively, and were purified through a nickel column (Novagen, Madison, WI). The NTPase assay was performed as previously described (Cui, T. et al.). The RdRp activity of NS5 was assayed using a WNV subgenomic RNA transcript containing a large deletion from nucleotide 269 to 10408. The reactions were labeled with [α-^{32}P]UTP and analyzed on a 4% denaturing polyacrylamide gel followed by autoradiography (Ackermann, M. et al.).